CLAIMS:

1.   A computer system, comprising:

means for operating a plurality of operating systems on one computer and allocating computer resources to the operating systems;

means for managing the computer resources;

means for updating allocation of the computer resources to the operating systems and restoring the allocation thereof;

means for managing contents respectively of the update of the computer resource allocation and the restoration of the computer resource allocation in relation to a state of operation of each of the operating systems; and

means for updating the computer resource allocation and restoring the computer resource allocation according to a state of operation of each of the operating systems.

2.   A method of controlling a computer system including a cluster system on one computer in which a plurality of operating systems are operating, one of the operating systems is used as an active operating system, another one thereof is used as a standby operating system, and when a failure occurs in the active operating system, processing thereof is passed to the standby operating system, comprising the steps of:

monitoring a failure in the active operating

system;

monitoring operation to pass processing to the standby operating system;

allocating, when the active operating system is operating, a larger part of the computer resources to the active operating system than to the standby operating system;

allocating, when the standby operating system starts operation after a failure occurs in the active operating system, a larger part of the computer resources to the standby operating system than to the active operating system; and

operating the standby operating system as an active operating system.

3.   A method of controlling a computer system in which a plurality of operating systems are operating on one computer, comprising the steps of:

monitoring load on each of the operating systems by monitoring a state of operation of the operating systems;

analyzing the load and determining a cause of a highest load on one of the operating systems; and

allocating, to the operating system having the highest load, computer resources necessary to remove the cause.

4.   A method of controlling a computer system in which a plurality of operating systems are operating on one computer, comprising the steps of:

managing a group of processing under each of the operating systems; and

comparing processing between the operating systems to determine processing to be preferentially executed and allocating a larger part of computer resources to the operating system to be preferentially executed.

5.   A method of controlling a computer system in which a plurality of operating systems are operating on one computer, comprising the steps of:

managing a group of processing under each of the operating systems and an operation time to execute each processing;

managing a content of update of computer resources and a valid period of time thereof according to the operation time; and

allocating computer resources to each operating system by relating processing under control of the operating system to dynamic allocation of computer resources.

6.   A method of controlling a computer system according to claim 3, further comprising the steps of:

managing computer resources not allocated to the operating systems;

managing a use ratio of each computer resource allocated to each operating system; and

allocating the computer resources not allocated yet to the operating systems to each

operating system according to the use ratio.

7.   A method of controlling a computer system according to claim 6, further comprising the steps of:

managing a user who establishes connection to the computer system to use computer resources;

managing a use time of each computer resource of the user;

updating allocation of computer resources in response to a request from the user;

allocating computer resources set by the user; and

charging according to a state of the computer resource allocation.

8.   A method of controlling a computer system in which a plurality of operating systems are operating on one computer, comprising the steps of:

reserving a shared main memory area shared among the operating systems; and

writing data in a format for communication in the main memory area and reading the data from the main memory area, thereby forming a virtual communication medium between the operating systems.

9.   A method of controlling a computer system in which a plurality of operating systems are operating on one computer, comprising the steps of:

operating the operating systems independent of each other; and

monitoring operation of each of the operating

systems by use of a resource shared among the operating

systems.